

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES**

In Re Application of: )  
Michael D. Zoekler )  
Serial No.: 09/559,704 ) Examiner: Harmon, Christopher R.  
Filed: April 27, 2000 ) Art Unit: 3721  
For: PAPERBOARD CARTONS WITH )  
LAMINATED REINFORCING RIBBONS )  
AND TRANSITIONED SCORES AND )  
METHOD OF MAKING SAME ) Confirmation No.: 2557

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**APPEAL BRIEF**

Sir:

This Appeal Brief is filed pursuant to 37 CFR 41.37, a Notice of Appeal having been filed on August 4, 2009.

**I. REAL PARTY IN INTEREST**

The real party in interest is the assignee, Graphic Packaging International, Inc.

**II. RELATED APPEALS AND INTERFERENCES**

On May 30, 2007, the Board of Patent Appeals and Interferences entered a Decision on Appeal in this application, reversing the rejection of claims 1-7, 9-16 and 25-34 (Appeal No. 2007-0809). A copy of that decision is included in the Related Proceedings Appendix hereto.

### III. STATUS OF CLAIMS

Claims 1-3, 5-7, 9-11, 13-15, 25-29, 31-33 and 77-81 are pending.

Claims 4, 8, 12, 16-24, 30, and 34-76 have been cancelled.

Claims 1-3, 5-7, 9-11, 13-15, 25-29, 31-33 and 77-81 are rejected, and their rejections are being appealed.

### IV. STATUS OF AMENDMENTS

No amendments have been filed subsequent to the non-final Office Action dated May 19, 2009.

### V. SUMMARY OF CLAIMED SUBJECT MATTER

Claims 1 and 25, the two independent claims on appeal, read on the specification and drawings of the application as follows:

Claim 1	Disclosure of S.N. 09/559,704
1. A method of making a paperboard carton having a top wall, a bottom wall, and two side walls, the carton having selectively reinforced panels, said method comprising the steps of:	A paperboard carton is made from blank 51 (p. 25, l. 1-6), the carton having a top wall 54, bottom wall 56, and side walls 57-59 (Fig. 3; p. 24, l. 3-10), with panels 61 reinforced by ribbons 62 (p. 24, l. 11 to p. 25, l. 6). Also, paperboard carton 116 has a top wall 120, 121, bottom wall 118, and side walls 117 (Fig. 8; p. 33, l. 4-15), the side walls 117 (panels 124) being reinforced by ribbons 123 (p. 33, l. 14-19).
(a) advancing a web of noncorrugated paperboard along a path, the web of noncorrugated paperboard having a width and longitudinally extending panel portions that will each become a plurality of panels, the longitudinally extending panel portions being separated by longitudinal fold lines;	Paperboard web 17 advanced along path 15 has longitudinal fold lines 27 which separate longitudinally extending panel portions that will each become a plurality of panels, e.g., panels 54, 56, 57, 58, 59, 61 (Fig. 3), or 118, 120, 121, 124 (Fig. 8).
(b) progressively applying and adhering at least a first ribbon and a second ribbon of	Reinforcing ribbons 21 are adhered to web 17. These ribbons overlie and adhere to

<p>reinforcing material to the advancing web of noncorrugated paperboard, the first ribbon and the second ribbon having a width less than the width of the web of noncorrugated paperboard, the first ribbon being positioned to overlie and adhere to substantially all of, but not beyond, a first selected longitudinally extending panel portion of the web, and the second ribbon being positioned to overlie and adhere to substantially all of, but not beyond, a second selected longitudinally extending panel portion of the web, the first ribbon and the second ribbon not extending across the longitudinal fold lines;</p>	<p>substantially all of selected panel portions, but do not extend over the longitudinal fold lines 27 (p. 24, l. 11 – p. 25, l. 25; p. 33, l. 4-19).</p>
<p>(c) cutting the web of noncorrugated paperboard to form a carton blank having panels corresponding to the top wall, the bottom wall, and the two side walls of the carton; and</p>	<p>See p. 20, l. 17 – p. 21, l. 20.</p>
<p>(d) forming the blank into the carton for receiving articles, the carton having an inside and an outside, the first ribbon and the second ribbon of reinforcing material reinforcing the carton and being positioned on the inside of the carton.</p>	<p>See p. 21, l. 20-23. Ribbons 62 (Fig. 5) or 123 (Fig. 8) are on the inside of the carton (p. 24, l. 16-21; p. 33, l. 16-19).</p>

Claim 25	Disclosure of S.N. 09/559,704
<p>25. A method of making a paperboard carton blank to be folded to form a carton having a top wall, a bottom wall, and two side walls, the carton having an inside and an outside, the method comprising the steps of:</p>	<p>A blank is made and folded into a carton having a top wall 54, bottom wall 56, and side walls 57-59 (Fig. 3; p.24, l. 3-10), or a carton 116 having a top wall 120, 121, bottom wall 118, and side walls 117 (Fig. 8; p. 33, l. 4-15). See p. 20, l. 17 – p. 21, l. 23.</p>
<p>(a) advancing a web of noncorrugated paperboard along a path, the web of noncorrugated paperboard having a first surface which will be on the inside of the carton when the blank is folded to form the carton, a width, and longitudinally extending panel portions that will each become a plurality of panels, the longitudinally extending panel portions being separated by longitudinal fold lines;</p>	<p>Paperboard web 17 advanced along path 15 has longitudinal fold lines 27 which separate longitudinally extending panel portions that will each become a plurality of panels, e.g., panels 54, 56, 57, 58, 59, 61 (Fig. 3), or 118, 120, 121, 124 (Fig. 8).</p>
<p>(b) laminating at least a first ribbon and a second ribbon of reinforcing material to the first surface of the advancing web of</p>	<p>Reinforcing ribbons 21 are adhered to web 17. These ribbons overlie and adhere to substantially all of selected panel portions, but</p>

noncorrugated paperboard, the first ribbon and the second ribbon having a width less than the width of the web of noncorrugated paperboard, the first ribbon being positioned on, and adhered to, substantially all of, but not beyond, a first longitudinally extending panel portion of the web of noncorrugated paperboard, and the second ribbon being positioned on, and adhered to, substantially all of, but not beyond, a second longitudinally extending panel portion of the web, the first ribbon and the second ribbon not extending across the longitudinal fold lines; and	do not extend over the longitudinal fold lines 27 (p. 24, l. 11 – p. 25, l. 25; p. 33, l. 4-19).
(c) cutting the web of noncorrugated paperboard and the laminated first ribbon and second ribbon across their length into a carton blank having panels corresponding to the top wall, the bottom wall, and the two side walls of the carton, whereby the first ribbon and the second ribbon are positioned on the inside of the carton when the carton blank is folded to form the carton, and reinforce the carton blank	See p. 20, l. 17 – p. 21, l. 20. Ribbons 62 (Fig. 5) or 123 (Fig. 8) are on the inside of the carton (p. 24, l. 16-21; p. 33, l. 16-19).

## VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

- (1) Whether claims 1, 3, 5-7, 11, 13, 25, 31-33 and 77 are anticipated by *Walsh* (U.S. Patent 5,746,871) (*Walsh*), under 35 U.S.C. § 102(b).<sup>1</sup>
- (2) Whether claims 1, 3, 5-7, 11, 13, 25, 31-33 and 77 are unpatentable over *Walsh*, under 35 U.S.C. § 103(a).
- (3) Whether claims 9 and 10 are unpatentable over *Walsh* in view of *Decottignies et al.* (U.S. Patent No. 5,097,651) (*Decottignies*), under 35 U.S.C. § 103(a)
- (4) Whether claims 2, 14, 15 and 26-28 are unpatentable over *Walsh* in view of *McNown* (U.S. Patent No. 5,447,270) (*McNown*), under 35 U.S.C. § 103(a).

<sup>1</sup> The Office Action Summary in the Office action of May 19, 2009, from which this appeal is taken, lists claim 3 as being rejected, but claim 3 is not included in any of the grounds of rejection on pages 2-5 of the Office action. For the purpose of this Appeal Brief, Applicant assumes that the Examiner intended to include claim 3 in grounds of rejection (1) and (2).

(5) Whether claims 78-81 are unpatentable over *Walsh* in view of *Meyers* (U.S. Patent No. 4,177,715) (*Meyers*), under 35 U.S.C. § 103(a).

## VII. ARGUMENT

This appeal is from the Office action dated May 19, 2009 (“Office action”), the claims having been twice rejected.<sup>2</sup>

### Introduction

The subject matter involved in this appeal concerns a method for making, from noncorrugated paperboard, cartons, and blanks for such cartons, which will still have enhanced strength and rigidity similar to that of “micro-flute” corrugated material in those regions where strength and rigidity are required. In the method, ribbons of a reinforcing material, such as paperboard, are laminated to selected panel portions of a moving web of noncorrugated paperboard. These panel portions are separated by longitudinal fold lines and subsequently become a number of panels when carton blanks are formed from the web. Each ribbon overlies and is adhered to substantially all of the panel portion to which it is adhered, but does not extend across the longitudinal fold line(s) which separate that particular panel portion from the remainder of the web. This allows the panel portions which will correspond to, for example, the end tabs (see tabs 61 in Fig. 3), or the side walls (see side walls 117 in Fig. 8) of the carton blank to be reinforced by the ribbons without interfering with the process of folding the carton blank along the fold lines (see Fig. 5) to form the carton.

The web is cut to form carton blanks, which may be then formed into cartons. During the cutting process, transverse fold lines (e.g., lines 52 in Fig. 3) may be scored, dividing the

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<sup>2</sup> The claims were rejected in a first Office action dated December 11, 2008 and were rejected in a second Office action dated May 19, 2009.

longitudinal panel portions into panels (e.g., panels 54, 56, 57, 58, 59, 61 in Fig. 3), or the cutting of the web into carton blanks may create panels from the longitudinal panel portions (e.g., panels 118, 120, 121, 124 in Fig. 8).

### **The Rejections**

#### **(1) Claims 1, 3, 5-7, 11, 13, 25, 31-33 and 77, anticipated by Walsh**

*Walsh* discloses a method of forming carton blanks from a web of material comprising a web of “relatively rigid material,” such as paperboard, to which a film of a “relatively flexible fluid impervious material,” such as a plastic, has been laminated. However, the plastic film “is not secured to the paperboard material at locations for forming top and bottom panel portions in the paperboard material” (col. 1, lines 16-18). Modified cut lines 52 are formed in the paperboard 2 (but not through film 10) of the carton blank to define the panel portions (e.g., 64) (col. 1, lines 31-51; col. 3, lines 42-50; col. 4, lines 9-16), which are then removed, leaving the overlying film 10 (col. 4, lines 20-67; Abstract, lines 8-12). In between the web 2 and film 10, strips (ribbons) 6 of a “relatively flexible material,” such as kraft paper, may be located. As shown in Fig. 3, these strips are adhered to film 10 by adhesive 22, but not adhered to paperboard web 2.<sup>3</sup> This lack of adhesion allows the portions 64 of paperboard 2 to be removed without sticking to film 10.

The Examiner refers to *Walsh*’s ribbons 6 as “reinforcing ribbons” and states at page 3 of the Office action that “The figures and disclosure [of *Walsh*] are considered to teach reinforcing both top and bottom panel portions which are defined by longitudinal fold lines by ribbons 6.” It is not apparent to Applicant where the Examiner finds support for such teaching. *Walsh* does not

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<sup>3</sup> Alternatively, as shown in Fig. 4, spaces 38 may be included in the adhesive instead of providing strips 6 (col. 3, lines 34-41).

disclose that the ribbons 6 provide reinforcement. Instead, as noted above, the purpose of *Walsh*'s ribbons is to prevent adhesion of the film 10 to web 2 at selected locations. In fact, as disclosed by *Walsh*, ribbons 6 are not even necessary since the same effect can be achieved by eliminating ribbons 6, and instead applying adhesive 22 in rows (compare Figs. 3 and 4 of *Walsh*, and see col. 3, lines 5-11 and 34-41). While any ribbon could be said to provide some degree of reinforcement, any reinforcement provided by the kraft paper of which *Walsh*'s ribbons 6 are comprised would seemingly be minimal relative to the paperboard of web 2, and that is not their disclosed purpose.

The Federal Circuit has held that it is fundamental that "To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently." In re Schreiber, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). In the present case, *Walsh* does not anticipate because it does not disclose, explicitly or inherently, at least the following recitations in independent claims 1 and 25.

(a) Walsh Does Not Disclose Longitudinal Fold Lines in the Web

Step (a) of claims 1 and 25 recites, *inter alia*:

advancing a web of noncorrugated paperboard along a path, the web of noncorrugated paperboard having ... longitudinally extending panel portions that will each become a plurality of panels, the longitudinally extending panel portions being separated by longitudinal fold lines (emphasis added)

*Walsh* does not show any fold lines in the illustration of web 2 in Fig. 2, or disclose that longitudinal fold lines 54 are present in web 2. As far as can be determined, the fold lines 54 are not formed until the carton blank (Fig. 5) is formed from the web (col. 3, lines 42-48). Since *Walsh* does not disclose an advancing web of paperboard having longitudinal panel portions separated by longitudinal fold lines as claimed, *Walsh* does not anticipate step (a) of claims 1 and

25.

(b) Walsh Does Not Disclose That Ribbons Do Not Extend Across Longitudinal Fold Lines

Claim 1 recites in step (b) that (emphasis added):

... the first ribbon being positioned to overlie and adhere to substantially all of, but not beyond, a first selected longitudinally extending panel portion of the web, and the second ribbon being positioned to overlie and adhere to substantially all of, but not beyond, a second selected longitudinally extending panel portion of the web, the first ribbon and the second ribbon not extending across the longitudinal fold lines;

and claim 25 recites in step (b) that (emphasis added):

... the first ribbon being positioned on, and adhered to, substantially all of, but not beyond, a first longitudinally extending panel portion of the web of noncorrugated paperboard, and the second ribbon being positioned on, and adhered to, substantially all of, but not beyond, a second longitudinally extending panel portion of the web, the first ribbon and the second ribbon not extending across the longitudinal fold lines;

*Walsh* does not disclose, expressly or explicitly, that the ribbons (strips) 6 do not extend across the horizontal fold lines 54 or that, for example, the bottom ribbon 6 shown in Fig. 2 is narrower than the distance between the lowest horizontal score line 54 and the bottom edge of the carton blank of Fig. 5 (i.e., that bottom ribbon 6 is narrower than panels 58), so that the bottom ribbon would not extend across the lowest score line 54. The Examiner has failed to identify any such express disclosure and instead states on page 3 of the Office action: “The figures and disclosure [of *Walsh*] are considered to teach reinforcing both top and bottom panel portions which are defined by longitudinal fold lines by ribbons 6. This would anticipate the claimed limitations as the ribbon 6 would coincide with the fold line 54 and therefore not extend beyond.” This statement does not establish anticipation, however, because, as discussed above, not only does *Walsh* not disclose or teach that ribbons 6 are provided for the purpose of reinforcement, but also, even if ribbons 6 were “reinforcing ribbons,” the Examiner’s assumption

that they “therefore” would not extend beyond the longitudinal fold lines 54 does not necessarily follow since it is known in the art that ribbons which reinforce panels may also extend across longitudinal fold lines. See, for example, *Claff*, U.S. Patent No. 2,008,608 (of record), in which reinforcing tapes 2 cover flaps (panels) 10 and extend beyond longitudinal fold lines 6.<sup>4</sup>

Since *Walsh* fails to provide an explicit disclosure that ribbons 6 do not extend beyond longitudinal fold lines 54, any finding of anticipation must be based on inherency. The Federal Circuit has held that: “[i]nherent anticipation requires that the missing descriptive material is ‘necessarily present,’ not merely probably or possibly present, in the prior art.” Trinitec Industries, Inc. v. Top-U.S.A. Corp., 295 F.3d 1292, 1295, 63 USPQ2d 1597, 1599 (Fed. Cir. 2002) (citing In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999)). Since the Examiner states on page 3 of the Office action that “The disclosure [of *Walsh*] is not clear as to the exact positioning of the ribbons of reinforcing material with respect to fold lines 54,” it is not apparent how it can be maintained that *Walsh* anticipates the claims, since “the disclosure of a reference must be clear to ‘anticipate’.” In re Lind, 264 F.2d 914, 916, 121 USPQ 222, 223 (CCPA 1959). See also In re Turlay, 304 F.2d 893, 899, 134 USPQ 355, 360 (CCPA 1962) (“It is well established that an anticipation rejection cannot be predicated on an ambiguous reference”).<sup>5</sup>

Moreover, Applicant submits that it is not merely unclear whether or not *Walsh*’s ribbons 6 extend across longitudinal fold lines 54, but rather, one of ordinary skill would conclude from *Walsh*’s disclosure that the ribbons 6 of *Walsh* do extend across the longitudinal fold lines 54 for at least the following two reasons:

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<sup>4</sup> *Claff* was employed by the Examiner as a reference in previous Office actions in this application. A copy is provided in the Evidence Appendix.

<sup>5</sup> Applicant submits that the Examiner is incorrect when he states that “the alleged ambiguity of *Walsh* is not sufficient to provide novelty to the claims” (Office action, page 5).

First, the widths of the ribbons 6 shown in Figs. 2 and 5 of *Walsh* are such that they would extend across the longitudinal fold lines 54.

Figs. 2 and 5 of *Walsh* are not on the same scale, i.e. the height of the web 2 shown in Fig. 2 is the width of two carton blanks (col. 3, lines 27-30), while Fig. 5 shows the height of a single blank. If Fig. 2 is enlarged to be on the same scale as Fig. 5, i.e., with web 2 of Fig. 2 twice the width of the carton blank of Fig. 5 (shown below), the width of the edge strips 6 in Fig. 2 is greater than the width of the edge panels 56, 58 in Fig. 5, and the width of the center strip 6 is more than twice the width of the edge panels 56, 58. Thus, to the extent of such information as can be gleaned from the drawings of *Walsh*, it appears that strips (ribbons) 6 would extend from the edges of the carton of Fig. 5 across the horizontal (longitudinal) fold lines 54.

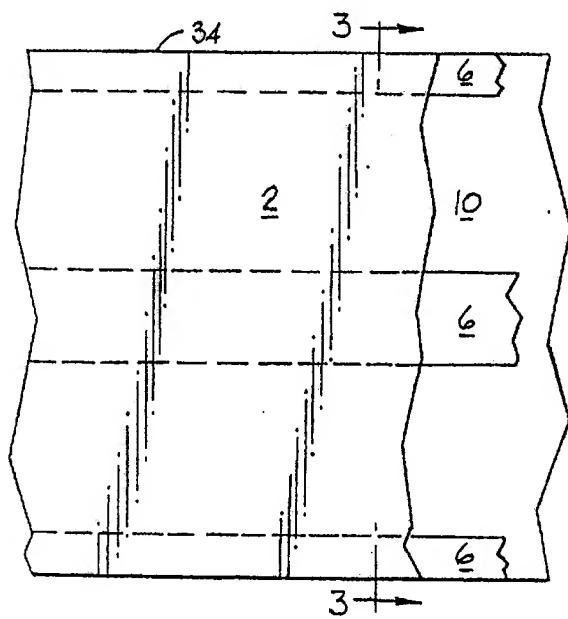


FIG 2

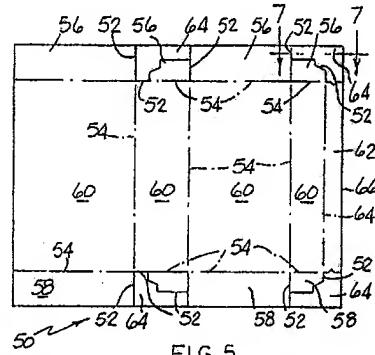


FIG.5

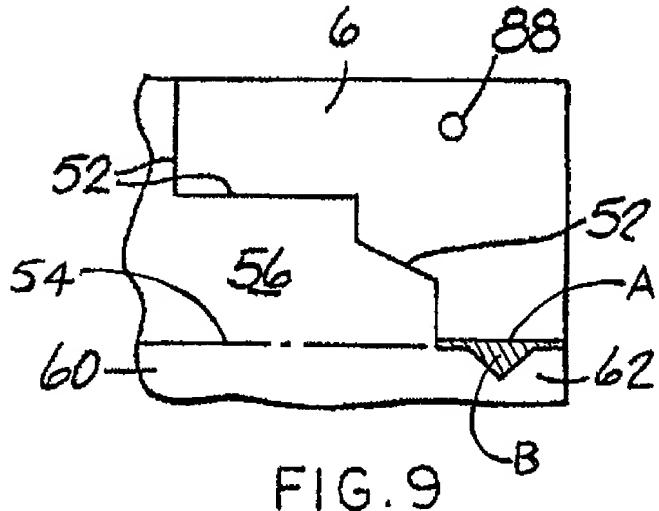
During prosecution of the application, the Examiner found this argument not persuasive, because "when the reference does not disclose that the drawings are to scale and is silent as to

dimensions, arguments based on measurement of the drawing features are of little value", citing Hockerson-Halberstadt, Inc. v. Avia Group Int'l, 222 F.3d 951, 55 USPQ2d 1487 (Fed. Cir. 2000) and MPEP 2125.<sup>6</sup> However, Applicant's comparison of Figs. 2 and 5 was not to show what the dimensions of the parts were, but to compare the width of the ribbons 6 relative to the distance between the edge of the carton blank and the longitudinal fold line 54. Such a comparison may validly be drawn from *Walsh*'s drawings since, as stated in Ex parte Hill, 169 USPQ 437, 438 (Bd. Apps. 1970), patent drawings "are assumed to show proportions of the parts they purport to delineate". At the very least, a comparison of Figs. 2 and 5 of the *Walsh* patent would tend to indicate to one of ordinary skill in the art that the ribbons 6 extend across the longitudinal fold lines 54, rather than that they do not.

Second, Figs. 5, 6, 9 and 11 of *Walsh* are inconsistent with a structure in which the ribbons 6 do not extend across the longitudinal fold lines 54. This is best illustrated by a consideration of *Walsh*'s Fig. 9, which is an enlarged portion of the upper right-hand corner of Fig. 6, i.e., a view of a corner of the carton blank from the paperboard web 2 side, with portion 64 removed at modified cut lines 52. Fig. 9 is reproduced below, with reference number 54 added for the convenience of the Board, and line "A" and cross-hatching "B" added to facilitate discussion.

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<sup>6</sup> Office action dated December 11, 2008, page 5.



As this illustration shows, (1) if ribbon 6 did not extend over the longitudinal fold line 54, the lower edge of the ribbon would be visible as a line, such as line "A", in the space from which portion 64 was removed. However, no such line is shown in Fig. 9 (or in Figs. 5, 6, or 11, either). Moreover, (2) if the lower edge of ribbon 6 was at line "A", ribbon 6 would not serve its purpose, because there would be an area "B" where portion 64 of the paperboard 2 would be adhered to film 10, so that when portion 64 was removed, it would pull the film 10 with it and cause the film to tear or otherwise be destroyed. This would be contrary to the purpose of the method taught by *Walsh*, which is to keep the film 10 intact when the portions 64 are removed. As disclosed, *Walsh*'s method is concerned with maintaining the integrity of the film 10, including sealing any opening 88 which the hook 84 may make in the film when portion 64 is being removed. (*Walsh*, col. 1, lines 27-30, col. 3; line 64 through col. 4, line 1; and col. 4, lines 32-37).

Accordingly, *Walsh*'s drawings, particularly in light of the purpose of ribbons 6, show that ribbons 6 extend across longitudinal fold lines 54, and therefore that *Walsh* does not disclose

all the limitations of step (b) of claims 1 and 25.

**Claims 7 and 32**

The Examiner's position with regard to claims 7 and 32 is somewhat incomprehensible (see Office action, page 4, lines 5-9), but as can best be understood, it is that the "intermediate longitudinally extending panel portion" called for by claim 7, or the "first panel portion extend[ing] along the web intermediate the opposed edges [of the web]" recited in claim 32, reads on the central ribbon 6 shown in *Walsh*'s Fig. 2. However, even ignoring the fact that *Walsh* does not disclose any longitudinal fold lines in the advancing web, the central ribbon does not meet the claims because, as discussed above, it, like the other ribbons 6, extends beyond the longitudinal fold lines 54.

Accordingly, for all the foregoing reasons, Applicant submits that it is clear that *Walsh* does not anticipate claims 1, 3, 5-7, 11, 13, 25, 31-33 and 77, and the rejection under § 102(b) should be reversed.

**(2) Claims 1, 3, 5-7, 11, 13, 25, 31-33 and 77, obvious over Walsh**

As an alternative to anticipation, the Examiner asserts that these claims are unpatentable over *Walsh* under 35 U.S.C. § 103(a) because "It would have been obvious to one of ordinary skill in the art to position the reinforcing ribbons without extending beyond the longitudinal fold lines in order to reinforce the top and bottom panels without interfering with the folding procedure in constructing the completed carton." (Office action, page 4)

Even assuming the Examiner's assertion to be correct, this ground of rejection does not establish that the claims are unpatentable under § 103(a), because it does not address the above-discussed lack of disclosure by *Walsh* of the claimed longitudinal fold lines in the advancing web of paperboard.

Moreover, Applicant submits that the Examiner's stated basis for his finding of obviousness is not correct. It would not have been obvious to position the ribbons 6 of *Walsh* so that they do not extend over longitudinal fold lines 54, as the Examiner proposes, because, as explained above, such an arrangement would cause part of *Walsh*'s removable panels 64 to adhere to film 10 (e.g., at area "B" in the above illustration of Fig. 9). Such a modification of *Walsh* would be contrary to *Walsh*'s teaching, and would not be suggested to one of ordinary skill in the art because it would lead to the undesirable result of causing film 10 to remain attached to part of panels 64 and thereby tear or otherwise lose its integrity when the panels 64 were removed. Since a modification of the prior art is not obvious if it would make the prior art unsuitable for its intended purpose, Ex parte Rosenfeld, 130 USPQ 113, 115 (Bd. Apps. 1961), the Examiner's proposed modification of *Walsh* would not have been obvious to one of ordinary skill in the art.

As pointed out previously, the ribbons 6 of *Walsh* are not provided for the purpose of reinforcement, and there is no basis in *Walsh* to teach or suggest that the ribbons be positioned in order to "reinforce the top and bottom panels". The Examiner's statement that such positioning would be done "in order to reinforce the top and bottom panels without interfering with the folding procedure in constructing the completed carton" appears to be based entirely on impermissible hindsight derived from Applicant's own disclosure, there being absolutely no disclosure in *Walsh* concerning reinforcement, or concerning any relationship between the position of the ribbons and folding of the carton blank to form a carton. (Such lack of disclosure by *Walsh* is not surprising, because since ribbons 6 are made of a "relatively flexible material" such as kraft paper, it does not appear that they would interfere with the folding procedure regardless of where they were positioned.)

For the foregoing reasons, the rejection of claims 1, 3, 5-7, 11, 13, 25, 31-33 and 77 as unpatentable over *Walsh* under 35 U.S.C. § 103(a) is not well taken and should be reversed.

**(3) Claims 9 and 10, unpatentable over *Walsh* in view of *Decottignies***

Since *Decottignies* does not overcome the above-discussed deficiencies of *Walsh*, claims 9 and 10 are patentable for the same reasons as their parent claim 1. Moreover, Applicant submits that claims 9 and 10 are patentable in their own right.

Claim 9, on which claim 10 depends, depends from claim 1 and calls for the step of “printing indicia on at least one of the first ribbon or the second ribbon of reinforcing material, the indicia being visible from the inside of the carton formed in step (d)”. *Decottignies* discloses a process for making containers from synthetic (plastic) film 2, in which sections of a top film 5 are welded to the surface of film 2 which will become the exterior of the container. *Decottignies* states that the “top film can advantageously be printed and will function as a label” (col. 2, lines 3-4). The Examiner takes the position that in view of this disclosure, it would have been obvious “to include printing indicia [on the ribbons 6 of *Walsh*] as desired for product enhancement” (Office action, page 4).

Applicant respectfully traverses this rejection. The teaching of *Decottignies*, to apply printing to a material being applied to what will become the exterior surface of a container to “function as a label”, is inapplicable to the ribbons 6 of *Walsh*, since *Walsh*’s ribbons 6 are not positioned on the exterior (or interior) surface of the carton blank, but are sandwiched between paperboard 2 and film 10, where they would not be visible (except where portions 64 are removed). Since *Walsh*’s ribbons 6 cannot effectively function as labels in this position, it would not have been obvious in view of *Decottignies* to print anything on them. In fact, even if *Walsh* were somehow combined with *Decottignies*, claim 9 would still not be met, since claim 9

requires that the printed indicia be visible from the inside of the carton, whereas *Decottignies* teaches that the printing is located on the exterior surface of the container.

**(4) Claims 2, 14, 15 and 26-28, unpatentable over *Walsh* in view of *McNown***

Since *McNown* does not overcome the above-discussed deficiencies of *Walsh*, claims 2, 14, 15 and 26-28 are patentable for the same reasons as their parent claims 1 and 25, respectively. Moreover, Applicant submits that claims 2, 14, 15 and 26-28 are patentable in their own right.

This ground of rejection, as understood by Applicant, is that it would have been obvious to make *Walsh*'s ribbons 6 out of paperboard in view of *McNown*'s disclosure of paperboard strips for reinforcing a carton. However, as discussed above, the purpose of *Walsh*'s ribbons 6 is not to provide reinforcement, but to prevent adhesion of web 2 to film 10 at selected locations, and *Walsh* does not suggest that any reinforcement is necessary. *Walsh* accordingly teaches the use of a "relatively flexible material", such as kraft paper, for strips (ribbons) 6 (col. 2, lines 55-56), in contrast to the "relatively rigid material", such as paperboard, used for web 2 (col. 2, lines 53-54). The relative flexibility of the strips 6 in *Walsh* is necessary in order for the strips to function as the patentee intended, namely to form a barrier between the rigid paperboard material 2 and the continuous film 10 of relatively flexible fluid impervious material (i) to allow the rigid material 2 to be cut along cut lines without piercing the film 10 while (ii) still allowing flexibility to fold the blank into a carton. These functions would be negated if the strips 6 were made of paperboard.

Accordingly, it would not have been obvious to modify *Walsh* in view of *McNown* by making the ribbons 6 of *Walsh* out of the same "relatively rigid material," i.e., paperboard, as the web 2, since there is no teaching or suggestion in *Walsh* that ribbons 6 are for the purpose of

reinforcement, and to do so would render *Walsh* unsuitable for its intended purpose and would change the principle of operation of *Walsh*, both of which are improper; see MPEP 2143.01(V) and (VI).

Parenthetically, if it is the Examiner's position that the combination of *Walsh* in view of *McNown* would have made it obvious to add paperboard strips (ribbons) to the *Walsh* carton blank for the purpose of reinforcement, Applicant submits that such a combination would not render the claimed subject matter obvious because, among other deficiencies, *McNown* only discloses applying paperboard strips to corrugated material, does not disclose applying such strips to an advancing web, and does not disclose strips which both overlie and adhere to substantially all of longitudinally extending panel portions and which do not extend across longitudinal fold lines.

**(5) Claims 78-81, unpatentable over Walsh in view of Meyers**

Since *Meyers* does not overcome the above-discussed deficiencies of *Walsh*, claims 78-81 are patentable for the same reasons as their parent claim 1, and their rejection should be reversed along with the rejection of their parent claim under § 103(a).

**CONCLUSION**

For the foregoing reasons, the subject matter of the appealed claims is not unpatentable over the grounds of rejection applied by the Examiner in the Office action. It is therefore respectfully requested that the rejections of claims 1-3, 5-7, 9-11, 13-15, 25-29, 31-33 and 77-81 be reversed.

The Commissioner is hereby authorized to charge any fees that may be required for the timely consideration of this Appeal Brief to Deposit Account No. 09-0528.

Respectfully submitted,



Ian A. Calvert  
Reg. No. 50,186

Date: September 21, 2009

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Docket No. R029 1056

## CLAIMS APPENDIX

1. A method of making a paperboard carton having a top wall, a bottom wall, and two side walls, the carton having selectively reinforced panels, said method comprising the steps of:
  - (a) advancing a web of noncorrugated paperboard along a path, the web of noncorrugated paperboard having a width and longitudinally extending panel portions that will each become a plurality of panels, the longitudinally extending panel portions being separated by longitudinal fold lines;
  - (b) progressively applying and adhering at least a first ribbon and a second ribbon of reinforcing material to the advancing web of noncorrugated paperboard, the first ribbon and the second ribbon having a width less than the width of the web of noncorrugated paperboard, the first ribbon being positioned to overlie and adhere to substantially all of, but not beyond, a first selected longitudinally extending panel portion of the web, and the second ribbon being positioned to overlie and adhere to substantially all of, but not beyond, a second selected longitudinally extending panel portion of the web, the first ribbon and the second ribbon not extending across the longitudinal fold lines;
  - (c) cutting the web of noncorrugated paperboard to form a carton blank having panels corresponding to the top wall, the bottom wall, and the two side walls of the carton; and
  - (d) forming the blank into the carton for receiving articles, the carton having an inside and an outside, the first ribbon and the second ribbon of reinforcing material reinforcing the carton and being positioned on the inside of the carton.
2. The method of claim 1 wherein at least one of the first ribbon or the second ribbon of

reinforcing material comprises noncorrugated paperboard.

3. The method of claim 1 wherein step (b) further comprises advancing the first ribbon and the second ribbon of reinforcing material along a path, applying adhesive to the advancing first ribbon and the advancing second ribbon, and progressively bringing the first ribbon and the second ribbon into engagement with the advancing web of noncorrugated paperboard to adhere the first ribbon and the second ribbon to the web.
5. The method of claim 1 wherein the longitudinally extending panel portions include a first edge panel portion and a second edge panel portion, the first edge panel portion and the second edge panel portion extending along opposed edges of the web of paperboard and wherein at least the first ribbon is positioned to overlie substantially all of, but not beyond, the first edge panel portion.
6. The method of claim 1 wherein step (b) further comprises applying and adhering atop the first ribbon or the second ribbon of reinforcing material an additional ribbon of reinforcing material to form a double thickness of reinforcing material.
7. The method of claim 1 wherein the longitudinal fold lines include a first longitudinal fold line and a second longitudinal fold line, wherein an intermediate longitudinally extending panel portion extends between the first longitudinal fold line and the second longitudinal fold line, and wherein the first ribbon is positioned to overlie substantially all of, but not beyond, the intermediate panel portion.

9. The method of claim 1 further comprising the step of printing indicia on at least one of the first ribbon or the second ribbon of reinforcing material, the indicia being visible from the inside of the carton formed in step (d).
10. The method of claim 9 wherein the indicia is printed on at least one of the first ribbon or the second ribbon of reinforcing material before being applied and adhered to the web of noncorrugated paperboard in step (b).
11. The method of claim 1 further comprising the step of scoring fold lines to separate the longitudinally extending panel portions of the web of noncorrugated paperboard.
13. The method of claim 11 wherein the first ribbon or the second ribbon of reinforcing material has an edge and wherein the step of scoring fold lines includes forming at least one fold line adjacent the edge of the first ribbon or the second ribbon.
14. The method of claim 1 where at least one of the first ribbon or the second ribbon of reinforcing material comprises paperboard trim.
15. The method of claim 1 wherein at least one of the first ribbon or the second ribbon of reinforcing material comprises paperboard cull.
25. A method of making a paperboard carton blank to be folded to form a carton having a top

wall, a bottom wall, and two side walls, the carton having an inside and an outside, the method comprising the steps of:

- (a) advancing a web of noncorrugated paperboard along a path, the web of noncorrugated paperboard having a first surface which will be on the inside of the carton when the blank is folded to form the carton, a width, and longitudinally extending panel portions that will each become a plurality of panels, the longitudinally extending panel portions being separated by longitudinal fold lines;
- (b) laminating at least a first ribbon and a second ribbon of reinforcing material to the first surface of the advancing web of noncorrugated paperboard, the first ribbon and the second ribbon having a width less than the width of the web of noncorrugated paperboard, the first ribbon being positioned on, and adhered to, substantially all of, but not beyond, a first longitudinally extending panel portion of the web of noncorrugated paperboard, and the second ribbon being positioned on, and adhered to, substantially all of, but not beyond, a second longitudinally extending panel portion of the web, the first ribbon and the second ribbon not extending across the longitudinal fold lines; and
- (c) cutting the web of noncorrugated paperboard and the laminated first ribbon and second ribbon across their length into a carton blank having panels corresponding to the top wall, the bottom wall, and the two side walls of the carton, whereby the first ribbon and the second ribbon are positioned on the inside of the carton when the carton blank is folded to form the carton, and reinforce the carton blank.

26. The method of claim 25 wherein at least one of the first ribbon or the second ribbon of reinforcing material comprises paperboard.

27. The method of claim 26 and wherein at least one of the first ribbon or the second ribbon of paperboard comprises paperboard trim.
28. The method of claim 26 wherein at least one of the first ribbon or the second ribbon of paperboard comprises paperboard cull.
29. The method of claim 25 and wherein step (b) comprises advancing the first ribbon and the second ribbon of reinforcing material along paths, applying adhesive to the first ribbon and the second ribbon of reinforcing material, and bringing the first ribbon and the second ribbon into contact with the web to adhere the first ribbon and the second ribbon to the web.
31. The method of claim 25 wherein at least a first edge panel portion extends along opposed edges of the noncorrugated paperboard web and wherein the first ribbon of reinforcing material is positioned within the first edge panel portion.
32. The method of claim 25 wherein the web of noncorrugated paperboard has opposed edges wherein the first panel portion extends along the web intermediate the opposed edges, the first ribbon of reinforcing material being applied within the first panel portion.
33. The method of claim 25 wherein an additional ribbon of reinforcing material is applied atop the first ribbon or the second ribbon of reinforcing material to form multiple layers of reinforcing material.

77. The method of claim 1, wherein the longitudinal fold lines are on the same side of the web as the first ribbon and the second ribbon.

78. The method of claim 1, wherein step (b) includes progressively applying and adhering at least a third ribbon to the advancing web, the third ribbon being positioned not to overlie any of the longitudinal fold lines, the third ribbon having a first portion adhered to the web and a second portion not adhered to the web, whereby the second portion of the third ribbon is capable of being folded in a direction away from the web.

79. The method of claim 78, wherein the first portion and the second portion of the third ribbon are divided by a fold line.

80. The method of claim 78, wherein the first portion and the second portion of the third ribbon are divided by a longitudinally extending fold line, and the second portion of the third ribbon extends between the fold line and one edge of the third ribbon.

81. The method of claim 78, wherein at least a third ribbon is positioned on the inside of the carton.

**EVIDENCE APPENDIX**

*Claff*, U.S. Patent No. 2,008,608, first cited by the Examiner in the Office action dated July 12, 2007.

July 16, 1935.

C. L. CLAFF

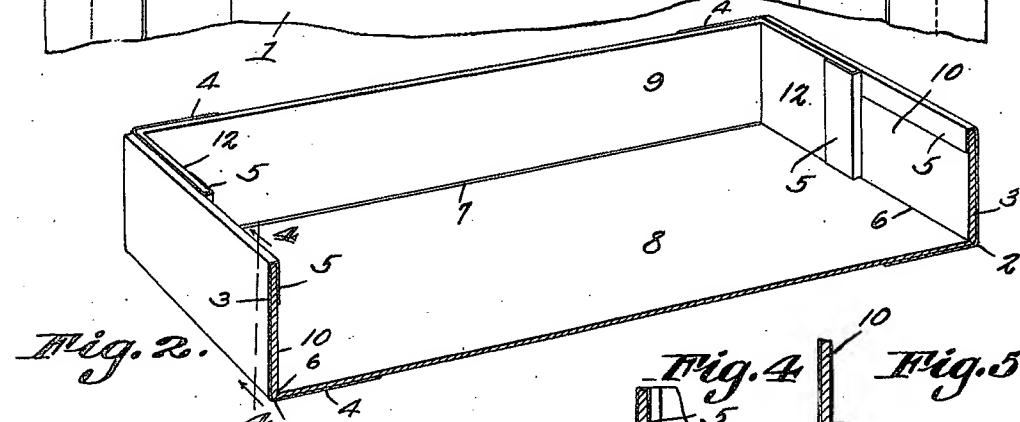
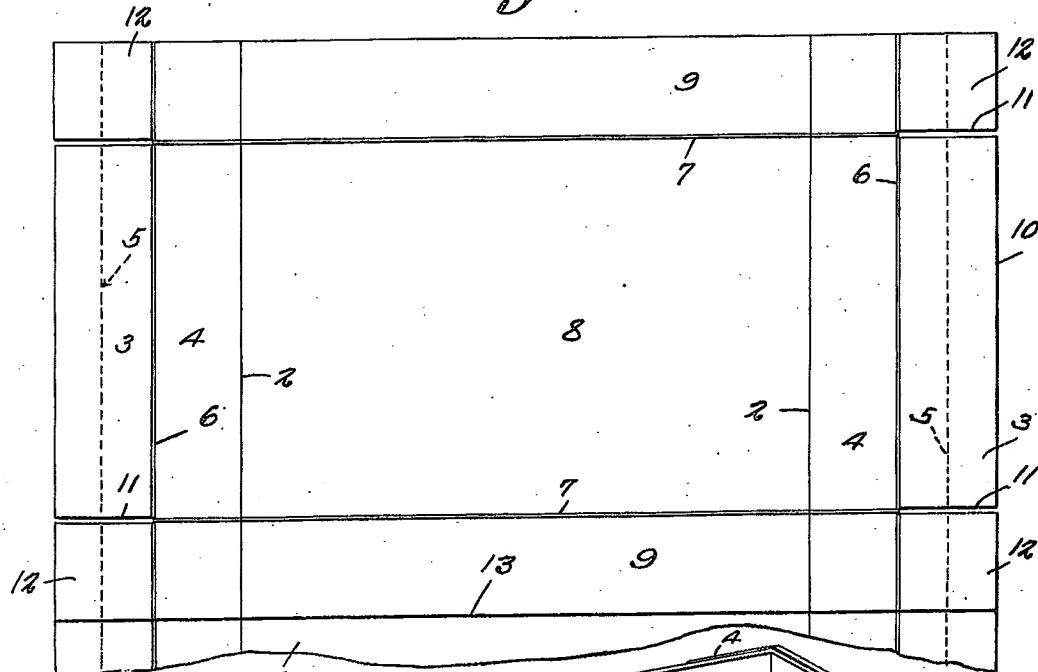
2,008,608

BOX CONSTRUCTION

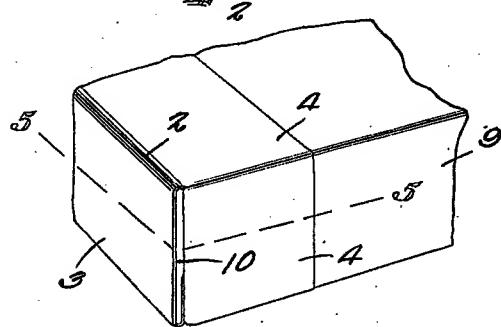
Filed Aug. 3, 1934

2 Sheets-Sheet 1

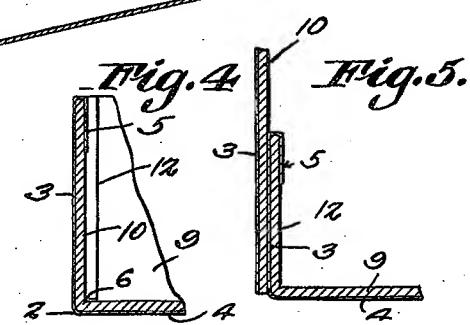
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



By *C. L. Claff*  
Attorneys.

Inventor

July 16, 1935.

C. L. CLAFF

2,008,608

BOX CONSTRUCTION

Filed Aug. 3, 1934

2 Sheets-Sheet 2

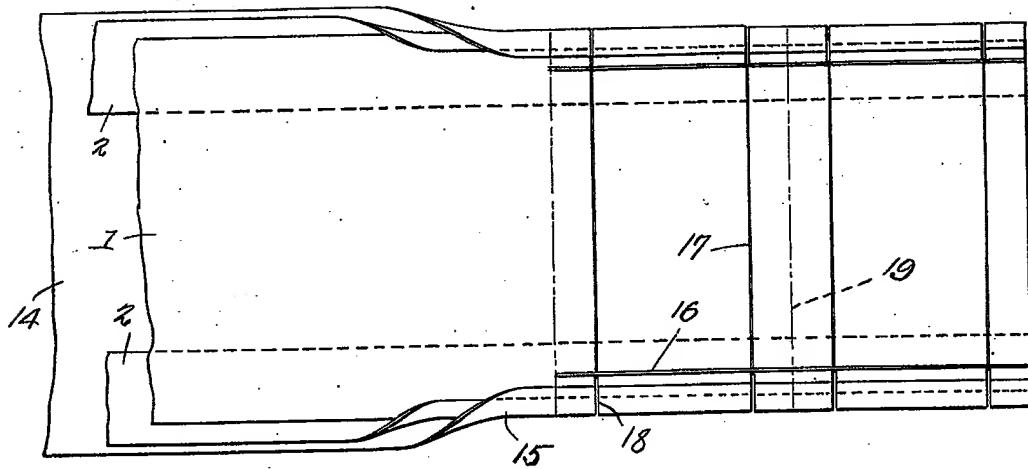


Fig. 6.

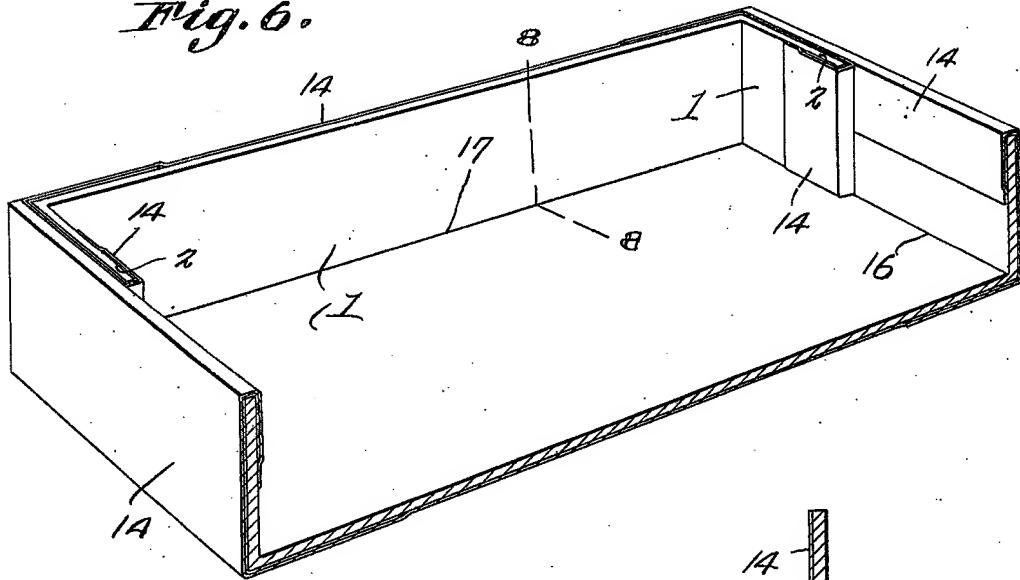


Fig. 7.

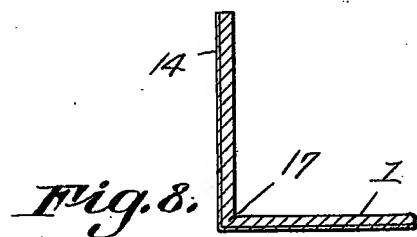


Fig. 8.

C. L. Claff

Inventor

By *Claff & Co.*  
Attorneys.

## UNITED STATES PATENT OFFICE

2,008,608

## BOX CONSTRUCTION

Clarence Lloyd Claff, Randolph, Mass.

REISSUED

Application August 3, 1934, Serial No. 738,359

2 Claims. (Cl. 93—58)

This invention relates to boxes of that type made from box-board material.

For the purpose of reinforcing box-board material and at the same time imparting a well finished appearance to the completed box, it has been the practice usually to provide the material with an outer covering of paper folded over all edges of the box. This covering has added greatly to the cost of every box. Cheaper boxes have been provided without the outer covering of paper for use where the appearance is not the important factor but boxes thus made have not possessed the requisite strength because the cheaper grades of box-board material are easily torn.

Various means have been devised heretofore for reinforcing boxes of this kind. For example the edges have been bound with paper tape and, in some instances, threads have been extended around the boxes and held in place by lengths of tape. These reinforcing means, while effective to a certain extent, have added objectionably to the cost of boxes where the primary purpose is to make the boxes as cheaply as possible. Consequently the production of a durable box at the lowest desirable cost without the outer covering of paper has not heretofore been possible.

It is an object of the present invention to produce a box of box-board material at what is believed to be the lowest possible cost where speed of manufacture and strength are desirable features.

It is a further object to utilize box-board material only in the formation of the greater portions of the box, there being a novel arrangement of paper tape better known in the art as "Kraft tape" whereby the produced box will be reinforced at its corners against tearing.

It is a further object to construct the boxes by a method whereby they can be produced rapidly and at low cost.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts and in certain steps of the method hereinafter more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of parts and in the disclosed method without departing from the spirit of the invention as claimed.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings

Figure 1 is a plan view of one end portion of

a web of box-board material with the reinforcing tape applied thereto, a completed box blank being formed at the end of the tape.

Figure 2 is a perspective view of a portion of a box formed from the blank illustrated in Figure 1.

Figure 3 is a perspective view showing the outer surface of one corner portion of the completed box.

Figure 4 is a section on line 4—4, Figure 2.

Figure 5 is a section on line 5—5, Figure 3.

Figure 6 is a plan view of the several webs used in the manufacture of a modified form of box, these webs being illustrated in different stages of the operation of producing a blank.

Figure 7 is a perspective view of a portion of a box of the modified construction.

Figure 8 is a section on line 8—8 of Figure 7.

In making the boxes herein described there is used a continuous web 1 of box-board material which can be of any grade desired although, by following the method herein described, the cheapest grades can be used. To the longitudinal or side edges of this web 1 are applied strips of adhesive tape indicated at 2, this tape being preferably of that type known to the trade as "Kraft tape" which is formed of a very tough paper having a strong quick drying adhesive on one surface. The tape used is of a width greater than the height of the walls of the box to be made so that there will be enough material in each tape not only to cover the outer surface of the reinforced wall but also to extend a short distance along the bottom of the box at one edge while the other edge portion of the tape can be folded over the free top or longitudinal edge of the wall. In the drawings that portion of the tape covering and reinforcing the outer surface of the wall has been indicated at 3 while that portion affixed to the bottom of the box has been indicated at 4. The other edge portion of the tape which is folded inwardly to reinforce the top edge of the wall has been shown at 5.

After the tape has been applied to the opposed edge portions of the web 1 the said web is scored or creased longitudinally as at 6 and transversely as at 7 so as to define the bottom portion 8 of the box, side flaps 9 and end flaps 10. Thereafter the end flaps are cut transversely in line with the scores or creases 7, the slots 11 thus produced extending from the outer free edges of the flaps 10 to the adjacent longitudinal scores or creases 6. Thus wings 12 constituting extensions of the flaps 9 are divided from the end flaps 10. The complete blank for the box is severed from

the web 1 along the transverse line 13 and said blank is then shaped by a suitable former so that wings 12 at each end of the box will be extended toward each other while the end flaps 10 and the side flaps 9 will extend upwardly from the bottom portion 8. The end flaps 10 are affixed to the wings 12 to complete the formation of the box.

It will be noted that the outer surface of each end flap 10 forming the end wall of the box is completely covered by the portion 3 of tape 2. Thus said end wall or flap is reinforced throughout its area by this tape and the reinforcement also extends along the adjacent portion of the bottom 8 to which the tape is affixed. The outer surface of each wing 12 and the adjacent portions of the side walls or flaps 9 are similarly reinforced with the result that when the formation of the box is completed there is no danger of the box becoming torn along the end creases or at the corners as a result of ordinary handling. The incisions or slots 11 do not extend entirely across the reinforcing tapes but terminate within the areas reinforced thereby. Therefore the walls of the slots are reinforced and the danger of tearing these slots during the shaping of the box or subsequent to the formation of the box is greatly reduced.

When the box is on a shelf for display purposes the end or reinforced wall is the one usually arranged at the front of the shelf. It is this wall that is grasped and pulled forwardly for the purpose of removing the box. As each end wall is reinforced at its top edge by the turned fold 5 of the tape, the danger of tearing the wall when the box is pulled forwardly is practically eliminated.

Under many conditions it is desirable to provide the box with an outer paper covering and in order that this may be done without adding objectionably to the cost of manufacture it is designed to feed a web 14 of finishing paper so that it will extend across both the web 1 and the tapes 2. While the webs are being assembled during their continuous movement the edges of web 14 are folded over the edges of the tapes 2 so as to lap the edges of the web 1, it being understood that all of the webs are held together by a suitable adhesive. Following the folding of the edge portions of web 14 and tapes 2 as shown at 15 in Figure 6, the webs are scored or creased longitudinally and transversely as at 16 and 17 respectively, formed with side cuts or slits 18 in line with the transverse creases 17, subsequently severed along the lines 19, and then shaped to produce a box a portion of which has been shown in Figure 7, said box comprising a bottom with side and end walls. It will be noted that in the finished box the finishing paper extends over the top edges of the two end walls but is cut off flush with the top edges of the side walls. However as each box is usually displayed on a shelf with one end wall in front, the fact that raw

edges of webs 1 and 14 are exposed at the sides will not be objectionable in a box of this grade.

Obviously boxes constructed as described can be made at high speed and at low cost but will retain the durability and strength present only in boxes which have heretofore been produced at much higher cost.

While the present invention has been referred to as a box and a method of making the same it is to be understood that it applies equally as well to other types of containers such as open trays, box lids, etc., and that the term "box" used in the claims is to be construed as covering any type of container to which these improvements can apply.

What is claimed is:

1. The herein described method of producing a box which includes the step of applying to the side edges of a continuously moving web of box-board material continuous adhesive tapes of reinforcing material which are folded over said side edges and are affixed to one surface of the web, subsequently creasing or scoring the web and the tapes longitudinally and transversely to define the bottom, side and end walls of the finished box, then cutting slits into the reinforced side edges along the lines of the transverse scores, said slits terminating at the longitudinal scores, thereafter cutting the web transversely between the slits to provide blanks the end flaps of each of which are formed of the reinforced and slitted side portions of the web, the transverse cuts and the slits cooperating to form wings at opposite sides of each end flap each of which has a reinforced end, and finally shaping the formed blank with the reinforced end walls lapping and affixed to the wings.

2. The herein described method of producing a box which includes the step of applying to the side edges of a continuously moving web of box-board material continuous adhesive tapes of reinforcing material which are folded over said side edges and are affixed to one surface of the web to cover an area greater than the height of the walls of the box to be produced, subsequently creasing or scoring the web and the tapes longitudinally and transversely to define the bottom, side and end walls of the finished box, then cutting slits into the reinforced side edges along the lines of the transverse scores, said slits terminating at the longitudinal scores and being completely surrounded by the reinforcing tape, thereafter cutting the web transversely between the slits to provide blanks the end flaps of each of which are formed of the reinforced and slitted side portions of the web, the transverse cuts and the slits cooperating to form wings at opposite sides of each end flap each of which has a reinforced end, and finally shaping the formed blank with the reinforced end walls lapping and affixed to the wings.

CLARENCE LLOYD CLAFF.

**RELATED PROCEEDINGS APPENDIX**

Decision on Appeal of the Board of Patent Appeals and Interferences in Appeal No. 2007-0809 (Application No. 09/559,704), dated May 30, 2007.

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* MICHAEL D. ZOECKLER

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Appeal 2007-0809  
Application 09/559,704  
Technology Center 3700

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Decided: May 30, 2007<sup>1</sup>

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Before MURRIEL E. CRAWFORD, JENNIFER D. BAHR, and  
LINDA E. HORNER, *Administrative Patent Judges*.

BAHR, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Michael D. Zoeckler (Appellant) appeals under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1-7, 9-16, and 25-34, the only

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<sup>1</sup> Appellant's counsel presented oral argument in this appeal on May 15, 2007.

pending claims. We have jurisdiction over this appeal under 35 U.S.C. § 6 (2002).

Appellant's claimed invention is directed to a method of making paperboard carton blanks and paperboard cartons with selectively reinforced panels. Claim 1 is illustrative of the claimed invention and reads as follows:

1. A method of making paperboard cartons with selectively reinforced panels, said method comprising the steps of:
  - (a) advancing a web of noncorrugated paperboard along a path, the web of noncorrugated paperboard having a width and longitudinally extending panel portions that will become panels separated by fold lines in completed paperboard cartons;
  - (b) progressively applying and adhering at least one ribbon of reinforcing material to the advancing web of noncorrugated paperboard, the ribbon having a width less than the width of the web of noncorrugated paperboard and being positioned to overlie and adhere to substantially all of a selected panel portion of the web;
  - (c) cutting the web of noncorrugated paperboard to form carton blanks having panels; and
  - (d) forming the carton blanks into cartons for receiving articles, the ribbon of reinforcing material reinforcing at least one panel of the cartons.

The Examiner relies upon the following as evidence of unpatentability:

Campbell	US 1,600,396	Sep. 21, 1926
Stokes	US 1,880,288	Oct. 04, 1932
Lang	US 5,147,480	Sep. 15, 1992

Stone US 5,551,938 Sep. 03, 1996

Appellant seeks review of the Examiner's rejections of claims 1-3, 11-16, 25-29, and 34 under 35 U.S.C. § 102(b) as anticipated by Stone, claims 4-7 and 30-33 under 35 U.S.C. § 103(a) as unpatentable over Stone in view of Stokes, and claims 1, 3-5, 7, 9-11, 16, 25, 29-32, and 34 under 35 U.S.C. § 103(a) as unpatentable over Lang in view of Campbell.

The Examiner provides reasoning in support of the rejections in the Answer (mailed October 6, 2006). Appellant presents opposing arguments in the Appeal Brief (filed August 3, 2006) and Reply Brief (filed November 6, 2006). A Declaration under 37 C.F.R. § 1.132 by Steve McLary, filed March 15, 2004, is appended to the Appeal Brief as evidence in support of Appellant's arguments against the rejection of claims 1, 3-5, 7, 9-11, 16, 25, 29-32, and 34 under 35 U.S.C. § 103(a) as unpatentable over Lang in view of Campbell (Appeal Br. 19-20).

## OPINION

The first issue for our consideration is whether the subject matter of claims 1-3, 11-16, 25-29, and 34 is anticipated by Stone and, more particularly, whether Stone's collar material 38, on which the Examiner reads the "ribbon of reinforcing material" of independent claims 1 and 25, is "positioned to overlie and adhere to substantially all of a selected panel portion of the web," as called for in claim 1, and "positioned on, and adhered to, substantially all of a longitudinally extending panel portion of the web of noncorrugated paperboard," as called for in claim 25 (*see* Appeal Br. 12).

We begin our analysis by first interpreting the claim language at issue. In particular, we focus our attention on the meaning of “panel portion” and

“substantially all,” as this language is critical to the limitation Appellant contends is not met by Stone.

We determine the scope of the claims in patent applications “not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction ‘in light of the specification as it would be interpreted by one of ordinary skill in the art.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316, 75 USPQ2d 1321, 1329 (Fed. Cir. 2005) (en banc) (*quoting In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364, 70 USPQ2d 1827, 1830 (Fed. Cir. 2004)). We must be careful not to read a particular embodiment appearing in the written description into the claim if the claim language is broader than the embodiment. *See Superguide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875, 69 USPQ2d 1865, 1868-69 (Fed. Cir. 2004) (“Though understanding the claim language may be aided by the explanations contained in the written description, it is important not to import into a claim limitations that are not a part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment.”) The challenge is to interpret claims in view of the specification without unnecessarily importing limitations from the specification into the claims. *See E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003).

We begin with the “panel portion.” Read within the context of the recitation “panel portions that will become panels separated by fold lines in completed paperboard cartons [carton blanks],” it is apparent that a “panel portion of the web” is not simply a portion of a panel but, rather, is a portion of the web that will become a panel separated by fold lines in completed

paperboard cartons or carton blanks. In other words, a “panel portion of the web” is a portion of the web that corresponds to a panel in the completed carton.

We next interpret the claim language “substantially all of a selected [longitudinally extending] panel portion of the web.” The term “substantially” is a term of degree. When a term of degree is used, such as the term “substantially” in claims 1 and 25, we must determine whether the specification provides some standard for measuring that degree. *See Seattle Box Co. v. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 826, 221 USPQ 568, 573-74 (Fed. Cir. 1984). This feature of Appellant’s invention is discussed on pages 24-26 of Appellant’s Specification. In particular, Appellant’s carton, “when formed, has ends defined by the end tabs 61 that are reinforced by the paperboard reinforcing ribbons 62 laminated thereto to [provide] enhanced strength, rigidity, and tear or blow-out resistance in the ends of the carton” (Specification 24:21 to 25:1). The Specification goes on to explain that, as illustrated in Figs. 4 and 5, the reinforcing ribbon 62 is preferably placed with respect to adjacent fold lines 53 to ensure that the added thickness of the ribbons does not interfere with the folding of the carton blank along the fold lines during conversion into a carton (Specification 25:7-11). The inboard edge 65 of the reinforcing ribbon 62 is “spaced a predetermined short distance from the fold line 53” to ensure that “the edge of the ribbon does not impact any of the panels of the blank or otherwise interfere with the folding process” (Specification 25:16-23). By way of example, according to Appellant, a predetermined short distance between a fold line and the inboard edge of a reinforcing ribbon of about .030 inches, the industry standard paperboard thickness, is easily achieved

and maintained and allows unimpeded folding of a carton blank while having little or no effect on the structural reinforcement provided by the reinforcing ribbon, although other appropriate distances may be chosen according to application specific requirements (Specification 26:1-11).

Consistent with the description in Appellant's Specification of the reinforced tabs 61 discussed above, we interpret the claim language "substantially all" to be directed to Appellant's preferred embodiment, illustrated in Figs. 3-5, wherein the reinforcing ribbon overlies and is adhered to the entirety of a panel portion, except for a predetermined short distance between its inboard edge and an adjacent folding line, the predetermined short distance selected to allow unimpeded folding of the carton blank while maximizing structural reinforcement.

The Examiner offers four theories to explain how Stone meets the limitation of claims 1 and 25 at issue. None of these theories is well founded.

In accordance with the first theory, the Examiner contends that Stone reinforces substantially all of panel portion 56 by adhering strip 38 (Answer 5). This theory is flawed in two respects. First, and most importantly, the panel 56, like panels 52, 54, 58, and 60, referred to by Stone, is a panel portion of the collar blank 46 that forms the collar 24 that is adhered to the carton blank 44 (Stone, col. 5, ll. 45-49). Panel 56 is *not* a panel portion of the carton blank 44 or the web of carton material 42 from which the carton blank 44 is die cut and scored (Stone, col. 4, ll. 66-67). Further, to permit the lid 30 to be raised upwardly from the base of the carton while the collar 24 is retained on the base section, the collar 24 is adhered to the carton 10, and hence to carton blank 44, only at locations

below the tear strip 27 of the collar 24 (Stone, col. 3, l. 66 to col. 4, l. 2) and not to the entirety of the portion of the carton blank 44 that the collar 24 overlies. Thus, even if the portion of carton blank 44 that the panel 56 of collar blank 46 overlies were considered to meet the “selected [longitudinally extending] panel portion of the web” of claims 1 and 25, panel 56 is not positioned to overlie and adhere to substantially all of such portion.

The Examiner’s second theory is grounded on an “extremely broad” interpretation of “substantially all of a selected panel portion of the web” as “any *portion* of any panel that is adhered to and covered by another (reinforcing) layer” (Answer 5). For the reasons discussed above, this is *not* a reasonable interpretation, either within the context of the claim itself or in light of Appellant’s Specification. Specifically, the recitation “panel portions that will become panels separated by fold lines in completed paperboard cartons [carton blanks]” in claims 1 and 25 clearly dictates that a “panel portion of the web” is not simply any portion of any panel but, rather, is a portion of the web that will become a panel separated by fold lines in completed paperboard cartons or carton blanks. Moreover, claims 1 and 25 also require positioning of the reinforcing ribbon to overlie and adhere to substantially all of a selected panel portion of the web. As discussed above, the collar blank 46 (collar 24) is adhered to the carton blank 44 only at locations below the tear strip 27 of the collar 24 (Stone, col. 3, l. 66 to col. 4, l. 2) and not to the entirety of the portion of the carton blank 44 that the collar overlies.

The Examiner’s third theory relies on Stone’s disclosure that “the width of the collar 24 may be modified so that the collar is relatively narrow

compared to the illustrated collar 24 or is relatively wide compared to the illustrated collar 24" (Stone, col. 6, ll. 42-45). According to the Examiner, "[w]idening of the strip 38 would anticipate [Appellant's] narrow interpretation of this limitation ie. the smallest 'selected panel portion' 50 would be substantially covered and adhered to by reinforcing material 38; see figure 3" (Answer 6). This theory is flawed in two respects. First, while the disclosure alluded to by the Examiner teaches modification of the width so as to be "relatively wide compared to the illustrated collar 24," it does not specify that the collar be so wide as to overlie substantially all of panel 50 and thus is not sufficient to anticipate the subject matter of claims 1 and 25. Moreover, one skilled in the art would view that disclosure within the context of Stone's teaching that collar 24 "preferably extends from an upper edge of the top wall 12 of the carton 10 to a location spaced a substantial distance from the bottom wall 14 of the carton 10" (Stone, col. 3, ll. 38-41) and, in so doing, would not infer an instruction to modify collar 24 to overlie substantially all of a selected panel portion of the web. Second, as pointed out above, Stone specifically teaches that the collar 24 is adhered to the carton 10 only at locations below the tear strip 27 of the collar 24 (Stone, col. 3, l. 66 to col. 4, l. 2). Accordingly, even if the collar 24 were modified to overlie all or substantially all of the panel 50, it would not also be positioned to be adhered to substantially all of panel 50.

The Examiner's fourth theory alludes to Stone's recognition of the capability of using a "full height liner" (Answer 6). Specifically, Stone teaches that, by virtue of its location spaced a substantial distance from the bottom wall 14 of the carton 10, "the collar 24 effects a substantial material savings relative to a full-height liner extending from the top wall 12 to the

bottom wall 14, thereby minimizing the cost associated with materials used for manufacturing the recloseable container" (Stone, col. 3, ll. 38-48). Even considering this to be a teaching of a non-preferred embodiment wherein the collar 24 extends the full height of the carton 10 from the top wall to the bottom wall 14, thereby overlying all, and thus substantially all, of a selected panel portion, for example, panel 16, Stone expressly teaches adhering the collar to the carton 10 only at locations below the tear strip 27 of the collar 24. Thus, such a "full-height liner" would still not satisfy the claim limitation at issue.

In light of the above, we conclude that the Examiner erred in rejecting claims 1 and 25, as well as dependent claims 2, 3, 11-16, 26-29, and 34, as anticipated by Stone. The rejection is reversed.

The Examiner's application of Stokes, relied upon simply for its teaching of reinforcing carton blanks with ribbons (Answer 5), does not make up for the deficiency of Stone discussed above. The rejection of claims 4-7 and 30-33, which depend from claims 1 and 25, therefore must also be reversed.

The second issue for our consideration is whether the subject matter of claims 1, 3-5, 7, 9-11, 16, 25, 29-32, and 34 is unpatentable over the combined teachings of Lang and Campbell. Claims 1 and 25 are directed to methods of making noncorrugated paperboard cartons and carton blanks and positively recite a step of advancing a web of *noncorrugated* paperboard. Lang, as acknowledged by the Examiner (Answer 4), is directed specifically to laminating single face liner 14, double face liner 38, and finish layer 64 to corrugated medium 20 and does not address laminating noncorrugated paperboard material. Consequently, to arrive at the subject matter of claims

1 and 25, the Examiner's rejection relies on the teachings of Campbell for a suggestion or reason to use the lamination method of Lang on noncorrugated paperboard (Answer 4). Therefore, the second issue in this appeal focuses on the question of whether the combined teachings of Lang and Campbell establish that it would have been obvious to use the lamination method of Lang on noncorrugated paperboard material, as required in independent claims 1 and 25.

In order to answer this question, we begin by examining what Lang teaches laminating to the corrugated material and the reasons for doing so. As best seen in Fig. 1, in Lang's process, medium 20 is corrugated or fluted in the single facer unit 16 by the action of two corrugator rolls 22 to form corrugated medium. A single face liner 14 is adhered to one face of corrugated medium 20 using adhesive applied by applicator 24 and pressure applied by pressure roll 28 to form single face material 30. A double face liner 38 is then adhered to the opposite face of single face material 30 in double backer glue machine 34 and hot and cold traction section 42 to form double face material 48, sometimes called "corrugated material." (Lang, col. 13, ll. 28-37, 54-59, and 64-68.) Single face liner 14 and double face liner 38 may be kraft paper, bleached paper, preprint, or any other type of board or paper typically used in the corrugating process (Lang, col. 13, ll. 60-63). The single face liner 14 and double face liner 38, and the process for adhering or laminating them to corrugated medium, have specific applicability to corrugated material and would be recognized as such by one of ordinary skill in the art. They provide relatively smooth and flat surfaces to otherwise fluted material, a function not similarly applicable to noncorrugated paperboard material. Lang also teaches laminating a finish

layer 64, typically preprinted with graphics (Lang, col. 15, ll. 10-15), onto the corrugated material 48 in a laminator 62. The laminator 62 includes an adhesive applicator 70 for applying adhesive to the finish layer and a laminator roll 80 and pressure roll 82 that apply the finish layer 64 to the corrugated material. (Lang, col. 14, ll. 23-65.) Application of a finish layer 64 at the dry end of the line (i.e., portions downstream of the hot and cold traction section (Lang, col. 1, ll. 45-47)) permits papers and composites accommodating high quality graphics to be used, enhances alignment and registration of the graphics with the slitter/scorer and chop knife, which are only a few feet away from the laminator, and eliminates scuffing and degradation that occurs in conventional wet end (i.e., portions upstream of the hot and cold traction section (Lang, col. 1, ll. 36-39) application processes as the composite is dragged through the line (Lang, col. 15, ll. 27-33). Lamination of the finish layer 64, like the single face liner 14 and double face liner 38, has particular application to corrugated material, to which print cannot be readily applied without degradation, because of the ridged and irregular corrugated surface to which the print must be applied (Lang, col. 5, l. 66 to col. 6, l. 8). This problem is not presented with noncorrugated paperboard.

Campbell teaches methods of reinforcing fiber board and corrugated board (Campbell 1:1-2). Campbell effects such reinforcement by inserting lines of fabric or other tape, or the like, between the plies of the board from which the blank is to be cut and scored, the lines of reinforcing material coinciding with the subsequent fold lines of the completed carton (Campbell 1:45-51). By providing reinforcement of the carton blank, and hence the erected carton, at the top and bottom edges of the carton, which are the weak

points of any carton or shipping case (Campbell 2:69-73), Campbell avoids the necessity of providing much heavier board and takes care of the weak points of any carton or wrapper in a very effective way, at small expense (Campbell 2:107-114). Campbell thus teaches away<sup>2</sup> from adhering reinforcing material to substantially all of a carton blank or any panel portion thereof.

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, §103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

*KSR Int'l. Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1740, 82 USPQ2d 1385, 1396 (2007). We must also bear in mind, however, that a claim to a combination of several elements is not proved obvious merely by demonstrating that each of its elements was independently known in the prior art. Although common sense directs us to look with care at claims directed to the combination of known devices according to their established functions, “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the

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<sup>2</sup> “A reference may be said to teach away when a person of ordinary skill, upon [examining] the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994)

way the claimed new invention does.” *Id.*, 127 S.Ct. at 1741, 82 USPQ2d at 1396.

As discussed above, because of the differences between corrugated material, which presents ridged and irregular surfaces, and noncorrugated material, which does not present such surfaces and thus can more readily accept printing directly thereon, one of ordinary skill in the art of paperboard cartons or blanks would not have recognized that the lamination of single or double face liners or a finish layer as taught by Lang would likewise improve carton blanks of noncorrugated material and thus would not have been prompted to utilize Lang’s lamination process on noncorrugated paperboard carton material. While the additional adhesive and finish layer of Lang’s lamination process may add considerable strength to the finished corrugated carton blank or carton (Lang, col. 10, ll. 9-14) and thus incidentally act as a reinforcing member, one of ordinary skill in the art of paperboard cartons and carton blanks would not have been prompted to utilize such a technique to reinforce noncorrugated paperboard material, especially in the face of Campbell’s teaching away from such an approach in favor of the cost-saving approach of providing reinforcement material only at the weak points of the carton, the top and bottom edges thereof.

In light of the above, we conclude that the combined teachings of Lang and Campbell fall short of establishing a *prima facie* case that it would have been obvious to use the lamination method of Lang on noncorrugated paperboard material, as required in independent claims 1 and 25. Accordingly, we need not address the Declaration under 37 C.F.R. § 1.132 by Steve McLary appended to the Appeal Brief. The rejection of

Appeal 2007-0809  
Application 09/559,704

independent claims 1 and 25, as well as dependent claims 3-5, 7, 9-11, 16, 29-32, and 34, as unpatentable over Lang in view of Campbell is reversed.

ORDER

The decision of the Examiner is reversed.

REVERSED

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